UNITED STATES DEPARTMENT OF COMMERCE
Patent and Trademark Office
Addr ss: COMMISSIONER OF PATENTS AND TRADEMARKS
Washington, D.C. 20231

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR		ATTORNEY DOCKET NO.
08/621,725	03/21/96	LEHMANN	P	CASE-02138

HM12/0609

PETER G CARROLL
MEDLEN AND CARROLL
SUITE 2200
220 MONTGOMERY STREET
SAN FRANCISCO CA 94104

EXAMINER	
SCHWADRON, R	
ART UNIT	**PAPER NUMBER**
1644	18

DATE MAILED: 06/09/99

Please find below and/or attached an Office communication concerning this application or proceeding.

Commissioner of Patents and Trademarks

Office Action Summary

Application No.	Applicant(s)
08/621,725	Lehmann et al.
Examiner	**Group Art Unit**
Ron Schwadron, Ph.D.	1644

☒ Responsive to communication(s) filed on *May 10, 1999*.

☒ This action is **FINAL**.

☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11; 453 O.G. 213.

A shortened statutory period for response to this action is set to expire *3* month(s), or thirty days, whichever is longer, from the mailing date of this communication. Failure to respond within the period for response will cause the application to become abandoned. (35 U.S.C. § 133). Extensions of time may be obtained under the provisions of 37 CFR 1.136(a).

Disposition of Claims

☒ Claim(s) *1, 2, 4-8, 18, and 20-25* is/are pending in the application.

Of the above, claim(s) *4-8, 18, and 20-24* is/are withdrawn from consideration.

☐ Claim(s) _____ is/are allowed.

☒ Claim(s) *1, 2, and 25* is/are rejected.

☐ Claim(s) _____ is/are objected to.

☐ Claims _____ are subject to restriction or election requirement.

Application Papers

☐ See the attached Notice of Draftsperson's Patent Drawing Review, PTO-948.

☐ The drawing(s) filed on _____ is/are objected to by the Examiner.

☐ The proposed drawing correction, filed on _____ is ☐ approved ☐ disapproved.

☐ The specification is objected to by the Examiner.

☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. § 119

☐ Acknowledgement is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d).

☐ All ☐ Some* ☐ None of the CERTIFIED copies of the priority documents have been

☐ received.

☐ received in Application No. (Series Code/Serial Number) _____.

☐ received in this national stage application from the International Bureau (PCT Rule 17.2(a)).

*Certified copies not received: _____.

☐ Acknowledgement is made of a claim for domestic priority under 35 U.S.C. § 119(e).

Attachment(s)

☐ Notice of References Cited, PTO-892

☐ Information Disclosure Statement(s), PTO-1449, Paper No(s). _____

☐ Interview Summary, PTO-413

☐ Notice of Draftsperson's Patent Drawing Review, PTO-948

☐ Notice of Informal Patent Application, PTO-152

--- SEE OFFICE ACTION ON THE FOLLOWING PAGES ---

1. Newly submitted/amended claims 18,20-24 are directed to an invention that is independent or distinct from the invention originally claimed for the following reasons.

Claims 18,20-24 are drawn to a method of detecting Th1 and Th2 directed immunity classified in Class 435, subclass 7.2. The invention under consideration in the instant application is a method of immunizing a human classified in Class 424, subclass 184.1. These methods are different methods that use different ingredients to achieve different goals. The invention of claims 18,20-24 is drawn to a method of detecting Th1 and Th2 directed immunity, wherein said cells are not recited in the method of claims 1,2 and 25, which is drawn to a method of immunization.

Since applicant has received an action on the merits for the originally presented invention, this invention has been constructively elected by original presentation for prosecution on the merits. Accordingly, claims 18,20-24 are withdrawn from consideration as being directed to a non-elected invention. See 37 CFR 1.142(b) and MPEP § 821.03.

2. Claims 1,2,25 are under consideration.

RESPONSE TO APPLICANTS ARGUMENTS

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

4. Claims 1 and 25 are rejected under 35 U.S.C. 103(a) as being unpatentable over Namikawa et al. in view of Tobin et al. (US Patent 5,674,978) and prior art disclosed in the specification (Alvord et al., Zamvil et al., Kimball) for the reasons elaborated in the previous Office Action. Applicants arguments have been considered and deemed not persuasive.

Namikawa et al. teach that immunization with MBP in IFA prevents EAE in rats (see page 932, first column, first paragraph). The specification discloses that the art recognizes certain similarities between EAE and human MS (see page 2, first paragraph). It would have been prima facie obvious to one of ordinary skill in the art at the time the invention was made to have created the claimed method because Namikawa et al. teach that immunization with MBP in IFA prevents EAE in rats and the art recognized similarities between EAE and human MS. One of ordinary skill in the art would have been motivated to do the aforementioned because Tobin et al. teach treatment with autoimmune antigens for the treatment of human disease.

Regarding applicants comments in page 4 of the instant amendment, the specification discloses that the art recognizes certain similarities between EAE and human MS (see page 2, first paragraph). In addition, Tobin et al. teach treatment with autoimmune antigens for the treatment of human disease. The M.P.E.P., section 2144 (July 1998), page 2100-115 teaches that with regards to the rationale/motivation supporting a rejection under 35 U.S.C. 103 that:

> *RATIONALE MAY BE IN A REFERENCE, OR REASONED FROM COMMON KNOWLEDGE IN THE ART, SCIENTIFIC PRINCIPLES, ART - RECOGNIZED EQUIVALENTS, OR LEGAL PRECEDENT*

The rationale to modify or combine the prior art does not have to be expressly stated in the prior art; the rationale may be expressly or impliedly contained in the prior art or it may be reasoned from knowledge generally available to one of ordinary skill in the art, established scientific principles, or legal precedent established by prior case law. In re Fine , 837 F.2d 1071, 5 USPQ2d 1596 (Fed. Cir. 1988); In re Jones , 958 F.2d 347, 21 USPQ2d 1941 (Fed. Cir. 1992). See also In re Eli Lilly & Co ., 902 F.2d 943, 14 USPQ2d 1741 (Fed. Cir. 1990) (discussion of reliance on legal precedent); In re Nilssen , 851 F.2d 1401, 7 USPQ2d 1500, 1502 (Fed. Cir. 1988) (references do not have to explicitly suggest combining teachings); Ex parte Clapp , 227 USPQ 972 (Bd. Pat. App. & Inter. 1985) (examiner must present convincing line of reasoning supporting rejection); and Ex parte Levengood , 28 USPQ2d 1300 (Bd. Pat. App. & Inter. 1993) (reliance on logic and sound scientific reasoning).

In the instant rejection, the motivation to combine the references is reasoned from knowledge generally available to one of ordinary skill in the art and established scientific principles. Namikawa et al. teach that immunization with MBP in IFA prevents EAE in rats, the art

recognizes certain similarities between EAE and human MS (see page 2, first paragraph) and Tobin et al. teach treatment with autoimmune antigens for the treatment of human disease. Regarding applicants comments about Tobin, Namikawa et al. teach that, "Furthermore, repeated injections of BP/IFA prevent subsequent induction of experimental allergic encephalomyelitis by BP emulsified in complete Freund's adjuvant."(see Abstract). Thus, Namikawa et al. teach that immunization with MBP in IFA prevents EAE in rats (see page 932, first column, first paragraph), while the specification discloses that the art recognizes certain similarities between EAE and human MS (see page 2, first paragraph). Tobin et al. teach treatment with autoimmune antigens for the treatment of human disease. The disclosure of Namikawa et al. teaches that immunization with MBP in IFA prevents EAE in rats and this disclosure is commensurate with the only experimental data disclosed in the specification (treatment of EAE in mice). According to the prior art disclosed in the specification (Alvord et al., Zamvil et al., Kimball), the art recognizes that EAE is a model for MS and therefore the treatment as disclosed by Namikawa et al. should be applicable to humans. Tobin et al, merely confirms that treatment with autoimmune antigens for the treatment of human disease is known in the art. Applicants comments in page 5 of the amendment filed 6/25/97 also indicate that the animal model disclosed in Namikawa et al. is an art recognized model predictive of human disease.

Regarding applicants comments in the instant amendment about Namikawa et al., Namikawa et al. teach that "Furthermore, repeated injections of BP/IFA prevent subsequent induction of experimental allergic encephalomyelitis by BP emulsified in complete Freund's adjuvant."(see Abstract). Regarding applicants comments in the instant amendment about Namikawa et al. and the issue of whether spleen cells from immunized rats can or cannot transfer disease, the claimed invention is not drawn to a method of treatment with spleen cells from an immunized donor. The claimed invention is drawn to a method of immunizing with MBP. Namikawa et al. teach that, "Furthermore, repeated injections of BP/IFA prevent subsequent induction of experimental allergic encephalomyelitis by BP emulsified in complete Freund's adjuvant."(see Abstract). Applicants arguments about spleen cells from immunized rats and the issue of whether said cells can or cannot transfer disease is irrelevant to the issue under consideration because the claimed invention is drawn to a method of immunizing with MBP and Namikawa et al. teach that immunization of rats by injection of BP in IFA prevents subsequent active or passive induction of EAE (page 932, first column, first paragraph) in every treated

individual. Regarding applicants comments about reasonable expectation of success, according to the prior art disclosed in the specification (Alvord et al., Zamvil et al., Kimball), the art recognizes that EAE is a model for MS and therefore the treatment as disclosed by Namikawa et al. should be applicable to humans. Tobin et al, merely confirms that treatment with autoimmune antigens for the treatment of human disease is known in the art. Applicants comments in page 5 of the amendment filed 6/25/97 also indicate that the animal model disclosed in Namikawa et al. is an art recognized model predictive of human disease.

5. Claims 1,2,25 stand rejected under 35 U.S.C. 103(a) as being unpatentable over Namikawa et al. in view of Tobin et al. (US Patent 5,674,978) and prior art disclosed in the specification (Alvord et al., Zamvil et al., Kimball) as applied to claim 1 above, and further in view of Goodwin et al. (US Patent 5,569,585) and Oprandy (US Patent 5,200,312).

The previous paragraph makes obvious the claimed invention except for the use of the immunoassay recited in the claims. Namikawa et al. teach that after immunization, the response of cells to a T cell mitogen is tested (see Table 3 and page 934, column 1). The response of T cells would have been alternatively measured using art known lymphokine assays, because the art recognizes that activated T cells produce lymphokines in response to antigenic stimulation (see Goodwin et al., see column 10, penultimate paragraph). ELISA assays for T cell cytokines are known in the art as is the membrane recited in claim 2 (see specification, page 8, first paragraph and Goodwin et al., column 10). Oprandy teaches the use of antibody coated PVDF membranes in immunoassays (see column 3 and Example 1). Oprandy teaches that the use of antibody coated PVDF membranes in immunoassays results in improved sensitivity (see column 3, first paragraph). It would have been prima facie obvious to one of ordinary skill in the art at the time the invention was made to have created the claimed invention because the previous rejection makes obvious the claimed invention except for the use of the immunoassay recited in the claims, while Namikawa et al. teach that after immunization, the response of cells to a T cell mitogen is tested and the response of T cells would have been alternatively measured using art known lymphokine assays, because the art recognizes that activated T cells produce lymphokines in response to antigenic stimulation (see Goodwin et al., see column 10, penultimate paragraph), ELISA assays for T cell cytokines are known in the art and Oprandy teaches that the use of antibody coated PVDF membranes in immunoassays results in improved sensitivity. One of ordinary skill in the

art would have been motivated to do the aforementioned because Namikawa et al. teach that after immunization, the response of cells to a T cell mitogen is tested and the response of T cells would have been alternatively measured using art known lymphokine assays, because the art recognizes that activated T cells produce lymphokines in response to antigenic stimulation. One of ordinary skill in the art would have been also been motivated to do the aforementioned because Oprandy teaches that the use of antibody coated PVDF membranes in immunoassays results in improved sensitivity.

Regarding applicants comments in the instant amendment, Goodwin et al. teach that activated T cells produce lymphokines in response to antigenic stimulation and that these lymphokines can be measured in immunoassays (see column 10, penultimate paragraph). The response of T cells would have been alternatively measured using art known lymphokine assays, because the art recognizes that activated T cells produce lymphokines in response to antigenic stimulation (see Goodwin et al., see column 10, penultimate paragraph). ELISA assays for T cell cytokines are known in the art as is the membrane recited in claim 2 (see specification, page 8, first paragraph and Goodwin et al., column 10). One of ordinary skill in the art would have been motivated to do the aforementioned because Namikawa et al. teach that after immunization, the response of cells to a T cell mitogen is tested and the response of T cells would have been alternatively measured using art known lymphokine assays, because the art recognizes that activated T cells produce lymphokines in response to antigenic stimulation. Oprandy teaches the use of antibody coated PVDF membranes in immunoassays (see column 3 and Example 1). Oprandy teaches that the use of antibody coated PVDF membranes in immunoassays results in improved sensitivity (see column 3, first paragraph).

6. No claim is allowed.

7. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL.** See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after

the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

8. Papers related to this application may be submitted to Group 1600 by facsimile transmission. The faxing of such papers must conform with the notice published in the Official Gazette, 1096 OG 30 (November 15, 1989). Papers should be faxed to Group 1600 at (703) 305-3014.

9. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Dr. Ron Schwadron whose telephone number is (703) 308-4680. The examiner can normally be reached Monday through Thursday from 7:30 to 6:00. A message may be left on the examiners voice mail service. If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Ms. Christina Chan can be reached on (703) 308-3973. Any inquiry of a general nature or relating to the status of this application should be directed to the Group 1600 receptionist whose telephone number is (703) 308-0196.

RONALD B. SCHWADRON
PRIMARY EXAMINER
GROUP ~~1800~~ 1600

Ron Schwadron, Ph.D.
Primary Examiner
Art Unit 1644
June 7, 1999